fw

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/912,167	07/23/2001	Susan Ciaburro	PA-Y1015	3969

41339 7590 12/18/2006
KARAMBELAS & ASSOCIATES
916 SILVER SPUR ROAD, SUITE 306
ROLLING HILLS ESTATES, CA 90274

EXAMINER	
LEE, JOHN J	
ART UNIT	**PAPER NUMBER**
2618	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
2 MONTHS	12/18/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

MAILED

APR 1 9 2007

Technology Center 2600

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/912,167
Filing Date: July 23, 2001
Appellant(s): CIABURRO ET AL.

Anthony W. Karambelas
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed August 18, 2006 appealing from the Final Office action mailed December 24, 2004.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final rejection has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the issues in the brief is correct.

The rejection of claims 1 – 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Norin et al. (US Patent number 6,157,817) in view of the Norin (US Patent number 6,233,433).

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence is Relied Upon

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

(9) Prior Art of Record

6,269,242	Leopold et al.	July 31, 2001
6,337,658	Tong et al.	January 8, 2002

(10) Grounds of Rejection

The rejection of claims 1 – 11 under 35 U.S.C 103, as being unpatentable over the Norin et al. (US Patent number 6,157,817) in view of the Norin (US Patent number 6,233,433). The rejection is set forth in a prior Office Action, mailed on November 16, 2004.

The following ground of rejection is applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. **Claims 1 – 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Norin et al. (US Patent number 6,157,817, hereinafter "Norin (817)) in view of Norin (US Patent number 6,233,433, hereinafter "Norin (433)).

With respect to **claim 1**, Norin (817) discloses that a method of testing a satellite (Fig. 1) receive antenna (4 in Fig. 1) of a multibeam satellite system (Fig. 1 and column 3, lines 47 – column 4, lines 24, where teaches testing a complex multibeam satellite receive antenna in orbit). Norin (817) teaches that uplinking a test signal (3 in Fig. 1) from a payload test earth station (Fig. 1) to the receive antenna (4 in Fig. 1) (Fig. 1 and column 4, lines 5 – 50, where Fig. 1 teaches testing earth station transmits uplink a test signal to the receive antenna). Norin (817) teaches that slewing the satellite over orientation angles using a slow constant attitude translation (Fig. 1, 2, abstract, and column 4, lines 5 – 24, where teaches the satellite's position is slewed over angles approximately covering the receive antenna areas of reception based on satellite orientation information, as the telemetry stream containing updated information is continuously transmitted, and also the telemetry antenna receives commands from ground station so that normal (slowly slewing) operation as the satellite is slewed). Norin (817) teaches that sensing a power level of the test signal on-board the satellite (Fig. 1) during

slewing (Fig. 1, 2, abstract, and column 4, lines 5 – column 5, lines 12, where teaches telemetry circuitry onboard the satellite senses the power levels of the signals and keeps track if the onboard equipment as the satellite's position is slewed over angles approximately covering the receive antenna areas of reception based on satellite orientation information). Norin (817) teaches that transmitting downlink telemetry (30 in Fig. 1) comprising sensed power level and orientation angles of the satellite from the satellite to the payload test earth station (Fig. 1, 2, column 4, lines 65 – column 5, lines 12, and column 4, lines 5 – 47, where teaches the satellite transmits downlink telemetry data stream which includes such information as satellite orientation, temperature, signal power (power levels), status, and other data). Norin (817) teaches that processing the sensed power level and said orientation angles to verify the operation of said receive antenna (4 in Fig. 1) on the satellite (column 4, lines 40 – column 5, lines 12 and Fig. 1, 2, where teaches the receive antenna of the satellite configures and processes the slewing angles (adjusting orientation angles) and sensed power levels).

Norin (817) does not specifically disclose the limitation "transmitting downlink telemetry from the satellite **to a telemetry and command earth station** that is located at a geographically separate location from the payload test earth station". However, Norin (433) teaches the limitation "transmitting downlink telemetry from the satellite (6 in Fig. 1) **to a telemetry and command earth station** (2 in Fig. 1) that is located at a geographically separate location (Fig. 1) from the payload test earth station (four test stations in Fig. 1)" (column 1, lines 44 – 57, Fig. 4, 5, and column 4, lines 66 – column 5, lines 17, where teaches a test signal is transmitted from ground station (command earth

station) and rebroadcast in downlink beams which are sampled to four test stations within their respective areas of coverage, more specifically, Fig. 1 teaches a satellite receives the telemetry stream from the earth command station and transmits the telemetry stream to test earth stations that the command earth station is located at a geographically separate location from the test stations). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Norin (817) system as taught by Norin (433), provide the motivation to reduce time and cost of verifying the performance of the satellite for broadcasting multiple downlink beams over a large geographic area in satellite system.

With respect to **claim 2**, Norin (817) and Norin (433) disclose the all the limitation, as discussed in claim 1. Furthermore, Norin (817) teaches that uplinking commands from an earth station (Fig. 1) to a satellite (Fig. 1) to cause a translation of the satellite (column 4, lines 24 – column 5, lines 12 and Fig. 1, 3, where teaches the uplink signal and telemetry stream are transmitted continuously, and the earth ground station generates uplink test (commands signals) signals, and translates the telemetry data stream). Norin (817) teaches that processing the noise power level and orientation angles to verify operation of the transmit antenna (24 in Fig. 1) on the satellite (column 3, lines 47 – column 4, lines 23 and Fig. 2, 6, where teaches column 4, lines 40 – column 5, lines 12 and Fig. 1, 2, where teaches the transmit antenna of the satellite configures and processes adjusting orientation angles and sensed power levels, and transmitting downlink signals, satellite transmit a telemetry data stream which includes information as a satellite orientation, signal power (actual power levels, noise levels), status and other

data for verifying operation of the antenna). However, Norin (817) does not specifically disclose the limitation "measuring downlink noise in a small bandwidth at the telemetry and command earth station while the satellite is translated". However, Norin (433) discloses the limitation "measuring downlink noise in a small bandwidth at the telemetry and command earth station while the satellite is translated" (column 4, lines 14 – column 5, lines 23, abstract, and Fig. 4, 5, where teaches received downlink signal is measured and recorded the signal information, power level within each downlink band, for reducing possibility of adding unwanted noise, more specifically, the ground test antenna is measured by test equipment such as a analyzer (frequency), frequency counter, delay analyzer (quality measurement), power meter (signal strength measurement, noise measurement within signal transmission rate), or other measurement device, and information relating to the signal is recorded by the test station computer for later processing (translating)). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Norin (817) system as taught by Norin (433). The motivation do so would be to achieve reducing unwanted noise by performing in-orbit satellite tests in satellite communication system.

With respect to **claim 3**, Norin (817) teaches that the uplinked commands cause a slow constant attitude translation of the satellite (column 4, lines 5 – 39, Fig. 1, and column 4, lines 52 – column 5, lines 12, where teaches the telemetry stream containing updated information is continuously transmitted, and also the telemetry antenna receives commands from ground station so that normal (slewing slowly) operation as the satellite is slewed).

With respect to **claim 4**, Norin (817) teaches that the uplinked commands cause a discrete steps (indicating power levels) in attitude translation of the satellite (column 4, lines 5 – column 5, lines 12 and Fig. 1, where teaches generating the uplink test signals to adjust power of the signal for transmission and translating the telemetry data stream for slewing of the satellite).

With respect to **claim 5**, Norin (817) and Norin (433) teach the all the limitation, as discussed in claims 1 and 2. Furthermore, Norin (817) teaches that positioning an uplink beam is over an earth station (column 2, lines 36 – 65 and Fig. 1). Norin (817) teaches that uplinking signals at different frequencies of interest from the earth station to the satellite (column 6, lines 4 – 64 and Fig. 5, 6, where teaches two uplink test signals can be transmitted at different respective frequencies). Norin (817) teaches that generating downlink telemetry on-board the satellite that corresponds to the signal strengths of respective signals at the different frequencies (column 4, lines 5 – 64, Fig. 1, 6 and column 6, lines 4 – 33, where teaches telemetry circuitry generates downlink telemetry data stream and onboard the satellite senses the power levels of the signals, and keep track of the onboard equipment of different respective frequencies). Norin (817) teaches that recording the signal strength telemetry and uplink frequency at the earth station (column 4, lines 25 – 64 and Fig. 1, where teaches the ground station stores the translated position and signal information (power levels) from telemetry data stream). Norin (817) teaches that processing the recorded signal strength telemetry and uplink frequency to produce the input power frequency response curve (column 4, lines 25 – 64 and Fig. 1, where teaches the ground station stores the translated position and signal

information from telemetry data stream for processing that computer plots the power levels (input) as a function of the satellite's position to produce a map (output) of the receive antenna pattern).

With respect to **claims 6 and 8**, Norin (817) and Norin (433) disclose the all the limitation, as discussed in claims 1 and 2.

With respect to **claim 7**, Norin (817) and Norin (433) teach the all the limitation, as discussed in claims 1 and 5. Furthermore, Norin (817) teaches that uplink RF signals at a plurality of power levels from the earth station to the satellite (column 6, lines 4 – 64 and Fig. 5, 6, where teaches two uplink RF test signals including power levels can be transmitted at different respective frequencies from earth station). Norin (817) teaches that processing the recorded signal strength telemetry to produce the input chain transfer curve corresponding to input power frequency response (column 4, lines 25 – 64 and Fig. 1, 3f, where teaches the ground station stores the translated position and signal information from telemetry data stream for processing, computer plots the power levels (input) as a function of the satellite's position to produce a map (output) of the receive antenna pattern).

With respect to **claim 9**, Norin (817) and Norin (433) teach the all the limitation, as discussed in claims 2 and 5. However, Furthermore, Norin (817) teaches that processing the noise power measurements to generate the output chain frequency response curve (column 4, lines 25 – 64 and Fig. 1, 3f, where teaches the ground station stores the translated position and signal information from telemetry data stream for processing, computer plots the power levels as a function of the satellite's position to

produce a map of the receive antenna pattern). Norin (817) does not specifically disclose the limitation "measuring noise power of the downlink beam over a small bandwidth centered around a plurality of selected frequency of interest at the earth station". However, Norin (433) discloses the limitation "measuring noise power of the downlink beam over a small bandwidth centered around a plurality of selected frequency of interest at the earth station" (column 4, lines 14 – column 5, lines 23, abstract, and Fig. 3, 4, where teaches received downlink signal, that switched for selecting the sampled signals to be combined to produce a single combined signal/beam, is measured and recorded the signal information, power level within each downlink band, for reducing possibility of adding unwanted noise, more specifically, the ground test antenna is measured and switched for selecting the frequencies to be combined to produce a single combined signal/beam by test equipment such as a analyzer (frequency), frequency counter, delay analyzer (quality measurement), power meter (signal strength measurement, noise measurement within signal transmission rate), or other measurement device, and information relating to the signal is recorded by the test station computer for later processing (translating)). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Norin (817) system as taught by Norin (433). The motivation do so would be to achieve reducing unwanted noise by performing in-orbit satellite tests in satellite communication system.

With respect to **claim 10**, Norin (817) and Norin (433) teach the all the limitation, as discussed in claims 2 and 9. Furthermore, Norin (817) teaches that processing the recorded noise power measurements to generate a gain measurement of the transponder

(column 3, lines 47 – column 4, lines 64 and Fig. 1, 3f, where teaches the ground station stores the translated position and signal information (power levels, noise level) from telemetry data stream for processing, computer plots the power levels (input) as a function of the satellite's position to produce a map (gain) of the receive antenna pattern).

With respect to **claim 11**, Norin (817) and Norin (433) teach the all the limitation, as discussed in claims 2 and 7.

(11) Response to Arguments/Amendment

1. The Examiner respectfully disagrees with appellant's comments and arguments as stated in the "Argument" section of the Appeal Brief, for following reason:

In response to appellant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the reference (Norin et al. (US Patent number 6,157,817) teaches in-orbit multiple receive antenna pattern testing with telemetry circuitry onboard the satellite measures the power level of the uplink signal received and converts it to a corresponding digital value and then the Norin further improve teaching by (US Patent number 6,233,433) that teaches downlink antenna pattern which transmits from the satellite. Therefore, it would have been obvious to one

having ordinary skill in the art at the time the invention was made to modify the Norin (817) as taught by Norin (433), provide the motivation to improve reducing the in-orbit testing time and cost in satellite communication system.

Re claim 1: appellant argues that the combination of Norin (817) and Norin (433) do not teach the claimed invention "slewing the satellite over orientation angles using a slow constant attitude translation". However, The Examiner respectfully disagrees with Appellant's assertion that the Norin (817) and Norin (433) do not teach the claimed invention. Contrary to Appellant's assertion, the Examiner is of the opinion that Norin (817) teaches the satellite position is slewed over angles (orientation angles) which encompass the area of reception of receive antenna and slewing is accomplished by incrementally adjusting (constant attitude translation) the satellite roll and orientation, more specifically, the satellite's position is slewed over angles approximately covering the receive antenna areas of reception based on satellite orientation information, as the telemetry stream containing updated information is continuously transmitted, and also the telemetry antenna receives commands from ground station so that normal (slowly slewing) operation as the satellite is slewed (see Fig. 2, abstract, and column 4, lines 5 – column 5, lines 12), regarding the claimed limitation. Also, Appellant argues that the claimed limitation "sensing a power level of the test signal on-board the satellite during slewing" does not teach by Norin (817). However, The Examiner respectfully disagrees with Appellant's assertion. Contrary to Appellant's assertion, the Examiner is of the opinion that Norin (817) teaches telemetry circuitry onboard the satellite senses the power levels of the signals and keeps track if the onboard equipment as the satellite's position is slewed over angles approximately covering

the receive antenna areas of reception based on satellite orientation information, more specifically, telemetry circuitry converts the sensed uplink signal power levels to digital code for transmission in the telemetry data stream (signal on-board) returned to the ground test station during slewing (see column 6, lines 17 – 32, Fig. 1, 7, and column 4, lines 5 – column 5, lines 12) regarding the claimed limitation. In addition, Appellant argues that the Norin does not teach the claimed limitation "processing the sensed power level and said orientation angles to verify the operation of said receive antenna on the satellite". However, The Examiner respectfully disagrees with Appellant's assertion. Contrary to Applicant's assertion, the Examiner is of the opinion that Norin (817) teaches the satellite antenna configured and processed to perform sensed power levels and orientation angles (slewing angles) for testing procedure (see column 4, lines 25 – column 5, lines 12 and Fig. 1, 2), regarding the claimed limitation. Finally, the combination of Norin (817) and Norin (433) do not teach the claimed invention "transmitting downlink telemetry comprising sensed power level and orientation angles of the satellite from the satellite to a telemetry and command earth station". However, The Examiner respectfully disagrees with Appellant's assertion. Contrary to Appellant's assertion, the Examiner is of the opinion that Norin (817) teaches transmitting downlink telemetry data stream by telemetry circuit in the satellite for sensing the power level of received test signal and converts its to a digital code and slewing orientation angle as the satellite is slewed and communicating with command earth station, more specifically, the satellite transmits downlink telemetry data stream which includes such information as satellite orientation, temperature, signal power (power levels), status, and other data (see column 4, lines 25 – column 5, lines 12 and Fig. 1, 2). Also, Norin (433)

teaches a test signal is transmitted from ground station (command earth station) and rebroadcast in downlink beams which are sampled to four test stations within their respective areas of coverage, more specifically, Fig. 1 teaches a satellite receives the telemetry stream from the earth command station and transmits the telemetry stream to test earth stations that the command earth station is located at a geographically separate location from the test stations (see Fig. 1, 4, column 1, lines 44 – 57, and column 5, lines 1 – 10), it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Norin (817) system as taught by Norin (433), provide the motivation to achieve reducing the in-orbit testing time and cost in satellite communication system.

Re claim 2: Appellant argues that the combination of Norin (817) and Norin (433) do not teach the claimed invention "processing the noise power level and orientation angles to verify operation of the transmit antenna on the satellite". However, The Examiner respectfully disagrees with Appellant's assertion. Contrary to Appellant's assertion, the Examiner is of the opinion that Norin (817) teaches the transmit antenna of the satellite configures and processes adjusting orientation angles and sensed power levels, and transmitting downlink signals, satellite transmit a telemetry data stream which includes information as a satellite orientation, signal power (actual power levels, noise levels), status and other data for verifying operation of the antenna, more specifically, the satellite antenna configured to perform sensed power levels and orientation angles for the downlink signals to avoid interference. As avoiding interference for downlink signal, the low noise amplifier with filter in the satellite inherently measures and performs to reduce the noise power levels and adjusting orientation angles to operate of the transmit antenna (see column 4, lines 25 –

column 5, lines 12, Fig. 1, 2, and column 3, lines 47 – column 4, lines 4). Furthermore, Norin (433) also teaches using a switching matrix (processing the noise power for operation of the transmit antenna) is that it reduces the adding unwanted noise to the combined signal and providing a method of testing individual channels (see column 2, lines 64 – column 3, lines 35 and Fig. 2, 3), regarding the claimed limitation. Appellant also argues that the combination of Norin (817) and Norin (433) do not teach the claimed invention "measuring downlink noise in a small bandwidth at the telemetry and command earth station while the satellite is translated". However, The Examiner respectfully disagrees with Appellant's assertion. Contrary to Appellant's assertion, the Examiner is of the opinion that Norin (817) teaches the satellite configured to perform and measure sensed power levels with interference and orientation angles for the downlink signals for avoiding interference (see column 4, lines 25 – column 5, lines 12 and Fig. 1, 2), Furthermore, Norin (433) teaches the ground station measures the received signal and a test station computer to record data corresponding to the downlink signals including information relating to signal that measuring power levels and interference or noise power levels and bandwidth information within recorded information in each downlink band during satellite is processing (see column 3, lines 10 – 58, Fig. 3, 4, and column 4, lines 14 – column 5, lines 23), more specifically, received downlink signal is measured and recorded the signal information, power level within each downlink band, for reducing possibility of adding unwanted noise, more specifically, the ground test antenna is measured by test equipment such as a analyzer (frequency), frequency counter, delay analyzer (quality measurement), power meter (signal strength measurement, noise measurement within signal transmission rate), or other measurement device, and information

relating to the signal is recorded by the test station computer for later processing (translating)). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Norin (817) system as taught by Norin (433). The motivation do so would be to achieve reducing unwanted noise by performing in-orbit satellite tests in satellite communication system.

Re claims 3 and 4: Appellant argues that the combination of Norin (817) and Norin (433) do not teach the claimed invention "the uplink commands cause a slow constant attitude translation and a discrete steps in attitude translation of the satellite". However, The Examiner respectfully disagrees with Appellant's assertion. Contrary to Appellant's assertion, the Examiner is of the opinion that Norin (817) teaches during the test, the commands are transmitted from the ground test station to the satellite, directing it to adjust its orientation and normal operation, such that constant translation power level (discrete steps) to digital code, more specifically, the telemetry stream containing updated information is continuously transmitted, and also the telemetry antenna receives commands from ground station so that normal (slewing slowly) operation as the satellite is slewed (see column 4, lines 5 – column 5, lines 12 and Fig. 1, 3), regarding the claim limitation.

Re claim 5: Appellant argues that the combination of Norin (817) and Norin (433) do not teach the claimed invention "uplinking signal at different frequencies of interest from the earth station to the satellite". However, The Examiner respectfully disagrees with Appellant's assertion. Contrary to Appellant's assertion, the Examiner is of the opinion that Norin (817) teaches the ground test station transmits to the satellite multiple uplink test signals with frequencies corresponding to the receive antennas being tested

and each channel responds to uplink signals of different respective frequencies in the satellite (see column 6, lines 5 – 40 and Fig. 5, 6), regarding the claimed invention. Also, Appellant argues that the limitation "generating an input chain frequency response curve for a multibeam satellite communication system" does not teach by combination of Norin Norin (817) and Norin (433). However, the recitation has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). However, Appellant seems to argue that processing the recorded signal strength telemetry and uplink frequency to produce the input power frequency response curve. However, The Examiner respectfully disagrees with Appellant's assertion. Contrary to Appellant's assertion, the Examiner is of the opinion that Norin (817) teaches the ground station stores the translated position and signal information from telemetry data stream for processing that computer plots the power levels (generating input) as a function of the satellite's position to produce a map (output) of the receive antenna pattern (column 4, lines 25 – 64 and Fig. 1), regarding the claimed invention.

Re claims 6 and 8: The Examiner already responded the limitation at the claim 1.

Re claim 7: The Examiner already responded the limitation at the claims 2 and 5.

Re claim 9: Appellant argues that the combination of Norin (817) and Norin (433) do not teach the claimed invention "measuring noise power of the downlink beam over a small bandwidth centered around a plurality of selected frequency of interest at the earth station". However, The Examiner respectfully disagrees with Appellant's assertion. Contrary to Appellant's assertion, the Examiner is of the opinion that Norin (433) teaches received downlink signal, that switched for selecting the sampled signals to be combined to produce a single combined signal/beam, is measured and recorded the signal information, power level within each downlink band, for reducing possibility of adding unwanted noise, more specifically, the ground test antenna is measured and switched for selecting the frequencies to be combined to produce a single combined signal/beam by test equipment such as a analyzer (frequency), frequency counter, delay analyzer (quality measurement), power meter (signal strength measurement, noise measurement within signal transmission rate), or other measurement device, and information relating to the signal is recorded by the test station computer for later processing (translating) (column 4, lines 14 – column 5, lines 23, abstract, and Fig. 3, 4). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Norin (817) system as taught by Norin (433). The motivation does so would be to achieve reducing unwanted noise by performing in-orbit satellite tests in satellite communication system.

Re claim 10: In response to Appellant's arguments, the recitation "generating an gain measurement of a transponder of a multibeam satellite communication system" has

not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). Also, Appellant argues that the limitation "processing the recorded noise power measurements to generate a gain measurement of the transponder" However, Norin (817) teaches a computer stores the translated position and signal information (power levels, noise level) that including power level measurement and interference power measurement from the telemetry data stream and then processing and generating gain measurement of the satellite by an amplifier to increase the power of signal for transmission, more specifically, the computer plots the power levels with noise power of received downlink signals as a function of the satellite's position to produce a map (gain measurement) of receive antenna pattern (see column 3, lines 47 – column 4, lines 64 and Fig. 1, 3f), regarding the claimed limitation.

Re claim 11: The Examiner already responded the limitation at the claims 2 and 9.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

John J. Lee
Examiner Art Unit 2618

JL
December 5, 2006

Conferees:

Edward Urban (SPE) AU 2618

Matthew D. Anderson (SPE) AU 2618

MATTHEW ANDERSON
SUPERVISORY PATENT EXAMINER

Anthony W. Karambelas
655 Deep Valley Drive, Suite 303
Karambelas & Associates
Rolling Hills Estates, CA 90274

John J. Lee
United States Patent and Trademark Office
Patent Examiner
571-272-7880